



## Mean Flow Data for HEG Shot 1302

Ross Wagnild
Engineering Sciences Center
Sandia National Laboratories
Albuquerque, NM 87123

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. The views expressed herein are those of the authors and should not be interpreted as necessarily representing the official policies or endorsements, either expressed or implied, of Sandia or the U.S. Government.







# Mean Flow Parameters



- 7º Half-angle circular cone
  - 2.5mm-diameter nose radius, 1.0 m long
    - Grid uses 1215 x 350 cells, axi-symmetric
- Run Conditions 1302
  - Velocity = 2399 m/s; Density =  $10.7 \text{ g/m}^3$ ;
  - Temperature = 264 K; Vibrational Temperature = 264 K
  - Wall Temperature = 293 K; Mach 7.35
  - Mass Fractions
    - N2 = 0.7527; O2 = 0.2163; NO = 0.0307; O = 0.0003
- Flowfield data sent with presentation.





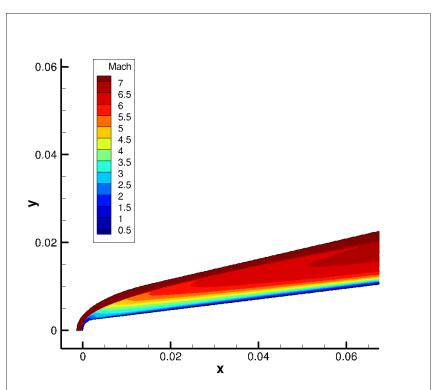


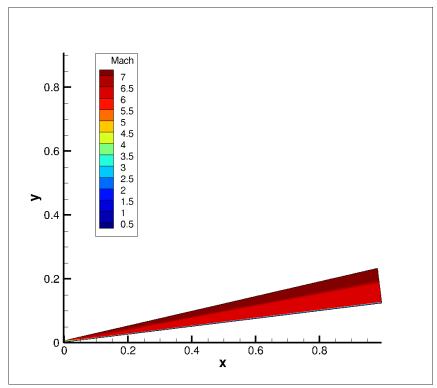
## **Mach Contours**



## **Nose Region**

**Full Cone** 







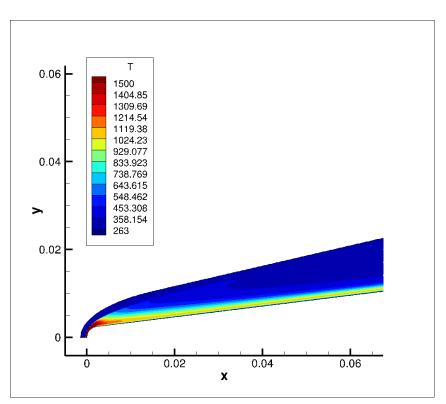


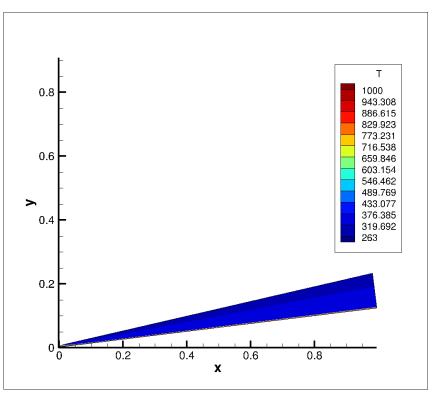
## **Temperature Contours**



## **Nose Region**

#### **Full Cone**













## **Nose Region**

**Full Cone** 

